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NEW OR NOTEWORTHY PORTO RICAN FUNGI

F. L. STEVENS

(WITH FOUR FIGURES)

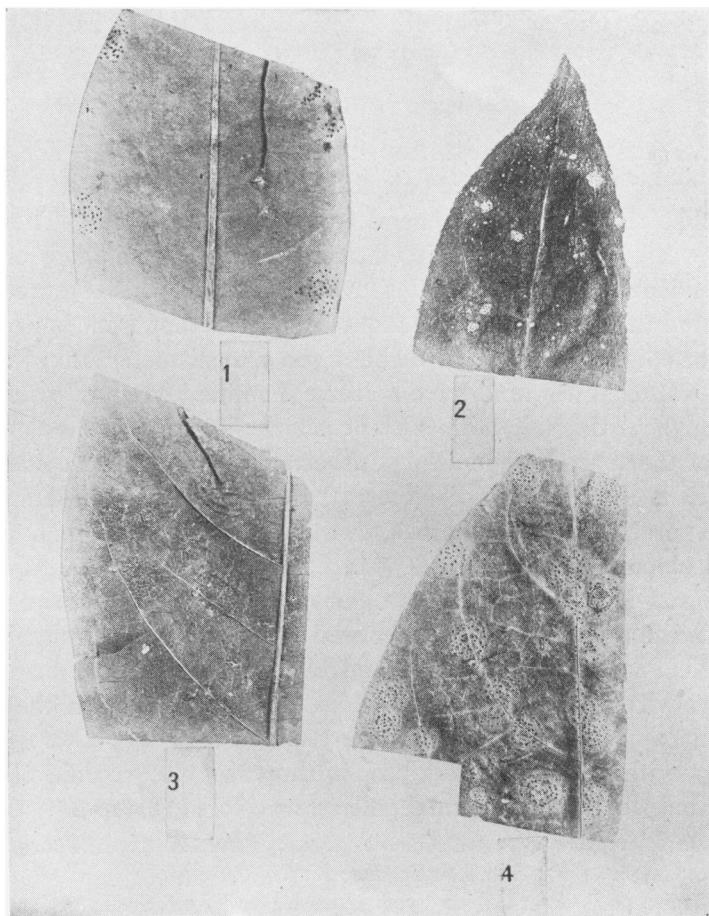
ANTHOSTOMELLA RHIZOMORPHAE (Ktz.) B. and V.—The spots caused by this fungus are pale to yellowish and are much swollen, so that they present a general aspect of insect galls. They are 0.5–1 cm. in diameter, circular, or when marginal more or less extended. Each spot contains several perithecia which are medially located in the leaf, that is, about equally distant from upper and lower epidermis. They are about 700 μ in diameter, thin-walled, the wall colorless, and have a coarse, hyaline mycelium extending throughout the spot, a black clypeus form in later stages occupying all of the space between the perithecium and the lower epidermis, which is 230–470 μ in diameter; the ostiole 40–50 μ in diameter. The paraphyses are numerous, threadlike, simple, septate, hyaline; asci oblong, stipitate, 150–175 or even 200 $\mu \times$ 50 μ , thin-walled, 8-spored, inordinate. Spores oblong, 24–40 \times 14–17 μ , brown when mature and 1-celled; the inner wall is uniform; the brown outer wall is pale yellow, wrinkled, and takes on very different appearances with different ages. Pycnidia are associated with the perithecia apparently on the same mycelium, oval, 125 μ across, 218 deep, with a thin clypeus; basidia short, simple; conidia oblong, pointed, obscurely 1-septate, pale straw colored, 3 \times 10 μ .

On *Rhizophora Mangle*. Guanica, 2484; Penuelles, 4559; Ponce, 8591, 9070; Cataño, 7607; San Jose Laguna, 9215.

The type is described on "coriaceous leaves" from Suriname, and may well have been on *Rhizophora*. The fungus is quite striking in appearance, but might be readily mistaken for an insect gall and thus overlooked by mycologists. The large spores with the several-layered coats, which give very striking appearances as they mature, are interesting structures.

Linospora trichostigiae, sp. nov.—Spots indefinite, 5–10 mm. in diameter, thickly studded with perithecia. Perithecia spherical, 150 to 200 to 250 μ in diameter, covered by a distinct clypeus and surrounded by a narrow (30–100 μ) pale zone. Clypeus

black, mostly epiphyllous, rarely hypophyllous. Ostiole irregular in shape. Ascii cylindrical, $90-112 \times 10-14 \mu$, thick-walled. Para-



Figs. 1-4.—Fig. 1, *Anthostomella rhizomorphae*, showing black clypei in pale spots; fig. 2, *Linospora trichostigmae*: black perithecia in small, blanched, dead areas; fig. 3, *Trabutia portoricensis*: numerous clustered perithecia in poorly defined spots; fig. 4, *Trabutiella cordiae*: perithecia arranged in circles in dead spots.

physes few, fine, threadlike. Spores linear, filiform, several, septate, pale yellow. Conidia 1-celled, hyaline, pointed at each end, very variable in size, mostly $21-24 \times 7 \mu$, but often 48μ long,

and also often quite small, borne in cavities indistinguishable from the perithecia.

On *Trichostigma octandra*, Guayanilla, 5924.

The perithecia are conspicuous from above on account of the black clypeus, and from below because of the protuberance that they cause. At maturity the clypeus falls away, the contents of the perithecia drop out, and a hollow "poc-mark" cavity remains. The variability of the conidia is quite remarkable.

Trabutia portoricensis, sp. nov.—Spots approximately circular, densely set with perithecia, area of young spots not at all or but slightly discolored, tissue of old spots dead, tan colored. Perithecia conspicuous above, due to the shining black clypeus, from below by the protuberance which they cause. Perithecia opening epiphyllous, clypeus black, 80–95 μ in diameter. Ostiole central, 10–15 μ in diameter. Perithecium central in the mesophyll. Asci irregular, thin-walled, 8-spored, inordinate, 68 \times 17 μ . Paraphyses many; spores filiform, oblong, obtuse, 24 \times 7 μ , continuous, hyaline.

On *Cocolobis nivea*, Mayaguez, 3907a (type), 976.

Trabutiella, gen. nov.—Similar to *Trabutia*, but with the asci 16-spored. Similar to *Ditopella*, but distinguished from it by its clypeus. Type of genus the following.

Trabutiella cordiae, sp. nov.—Spots when young but slightly discolored; later the tissue dies and the spots are tan colored, or they may remain green longer than the adjacent healthy tissue. Spots definitely bordered, almost exactly circular, 5–10 mm. in diameter, with the perithecia in quite regular concentric rings. The black clypeus always epiphyllous, about 280 μ in diameter, or oblong and 240 \times 500 μ . Ostiole 45–75 μ in diameter. Perithecia not visible from below, located in the mesophyll, 260–360 μ in diameter. Asci 85 \times 17 μ , 16-spored, thin-walled, inordinate; spores oblong, pointed at each end, 20 \times 3.5 μ , continuous, hyaline.

On *Cordia collococca*, Añasco, 276 (type); Mayaguez, 6295, 3907; Patillo Springs, 5730; Jayuda, 3977a; Hormigueros, 215.

Hyponectria phaseoli, sp. nov.—Spots circular, 5–10 mm. in diameter, amphigenous, few to numerous, often coalescing, pale yellowish, translucent, border indefinite. Perithecia abundant, immersed, translucent; when mature, with distinct protruding

ostiole which is surrounded by a dark border of clypeate structure, 200–230 μ in diameter. Ostiole 20 μ in diameter, dark ostiolar region 100 μ in diameter, opening mostly epiphyllous. Ascii linear to clavate, 75 μ long, 8-spored. Spores 1-seriate, crowded irregularly at apex of ascus, irregularly spherical to oval, often angular by pressure, continuous, hyaline, 9–10 \times 12 μ ; paraphyses threadlike, equal in length.

On *Vigna vexillata*, Rosario 3602 (type); Añasco, 3509; Vega Baja, 374a; Mayaguez, 978, 1483, 813, 1098, 3149; on *Phaseolus adenanthus*, Mayaguez, 6732; San German, Añasco, 4903, 308; *Phaseolus* sp., on Luquillo, Forest, 5555.

Zythia phaseoli, f. nov.—The conidial stage of *Hyponectria phaseoli*. Pycnidiospores produced in what appear to be the young perithecia, oval to linear (mostly linear), hyaline, straight or slightly curved, obtuse at each end, continuous, 10–20 \times 2–3 μ , often catenulate; conidiophores linear, long, branched.

On *Phaseolus*, 3149 (see also previous numbers).

This fungus is exceedingly abundant in Porto Rico, being found nearly as frequently as its host, and usually distributed thoroughly over the whole plant. It is of especially striking appearance, owing to its peculiar spot and the appearance, as though due to pellucid punctate dots, which is caused by the translucent perithecia.

The genus has but few representatives, perhaps less than a dozen, none of which agrees at all closely with the present species. On drying, the leaves show a peculiar tendency to dry out yellow in the healthy parts of the leaf, green in the sick parts. Only one other species seems to have been described with a conidial form, *H. buxi*, conidial form *Phoma mirbelii* (Fr.) Sacc.

UNIVERSITY OF ILLINOIS
URBANA, ILL.